

ABSTRACT

PT. Ricobana Abadi is a national company which engaged in rental of heavy equipment and mining contractors, the project located at PT. Tanito Harum Coal Mine, Pondok labu area, Tenggarong District, Kutai Kartanegara Regency, East Kalimantan. The contract between PT. Tanito Harum and PT. Ricobana Abadi is PT. Ricobana Abadi is only carry through Over Burden Removal form loading point to dumping point.

The target production of Over Burden Removal on planned by PT. Ricobana Abadi is 1.400.000 bcm/month. Series of work excavators and dump trucks (fleet) consist of 3 excavators komatsu PC 1250SP-8 with capacity 7,5 m³ combined by dump trucks komatsu HD 465-7R with capacity 26 m³, 2 excavators komatsu PC 2000 with capacity 13,7 m³ combined by dump trucks komatsu HD-785-7 with capacity 40 m³.

Actual Production of over burden removal on November 2011 is 1.442.182 bcm. Although the target production of over burden removal on November 2011 has been achieved but still need evaluation to find out and increase the production capability of 5 fleets. On the actual condition is 5 fleets not is always been applied with the number existing unit.

Actual Calculation from actual productivity are 752.157 bcm/month for excavator and 1.029.868 bcm/month for dump truck. Production from 4 series work of excavator and dump truck are 1.006.345 bcm/month for excavator and 1.065.280 bcm/month for dump truck.

The result of observation on the fleets there are still presence factors that caused less than optimal productivity. The factors such as:

- 1. Bench geometry less than optimal, loading method, hauling road geometry does not match with dimension of hauling unit used.*
- 2. Availability and utilization unit is inefficient*
- 3. Matching fleet of 0,92 – 1,18*
- 4. Lack of the number spare of excavator and dump truck.*

Cycle time after repair of the bench geometry is 0,50 minutes for excavator PC 1250SP-8 and 0,57 minute for excavator komatsu PC 2000-8 and obtained of the productivity iw 881.331 bcm/month. Increased productivity obtained from the improvement of bench geometry is 1.360.594 bcm/month. Productivity of the series work (fleet) after improve bench geometry with availability and utilization unit is 1.598.952 bcm/month. And then productivity after improve the availability and utilization unit is 1.521.840 bcm/month.

The result observation of excavators cycle time Backhoe Komatsu PC 1250SP-8 are 0,595 minutes and backhoe Komatsu PC 2000-8 are 0,665 minutes. Cycle time of excavators after improvement of bench geometry are 0,50 minutes for Backhoe Komatsu PC1250SP-8 and 0,57 minutes for Backhoe Komatsu PC2000-8. Availability and utilization of excavators was increased, there are MA

from 33% become 97%, PA from 68% become 76%, UA from 26% become 76% and EU from 23% become 74. Availability and utilization of dump truck was increased, there are MA from 33% become 98%, PA from 76% become 76 %, UA from 24% become 76% and EU from 23% become 74%.

Production from 4 fronts loading by improving the fleet matching. Production of 4 fleets after improve bench geometry is 1.136.406 bcm/month and after improved availability and utilization unit is 1.385.241 bcm/month.

Production after improved bench geometry and utilization of unit is 1.635.455 bcm/month. Production 4 fleets after improved of bench geometry, improve availability and utilization unit and with the additional bucket from 4 buckets to 6 buckets is 1.635.455 bcm/month. Based on result of theoretical calculation on 4 fronts loading, target production of 1.400.000 bcm/month which defined by PT. Ricobana Abadi can be achieved.